

CLAIMS

1. An encryption apparatus, comprising:

hold means for holding a part or all input data with a trigger signal and resetting the held data with a reset signal;

one or a plurality of counters that count up or count down the count values with the trigger signal and reset the count values to predetermined values with the reset signal;

encryption means for encrypting the data held by the hold means and one or a plurality of count values of the one or plurality of counters;

calculation means for calculating the output of the encryption means and input data that are input from the outside according to a predetermined rule, encrypting the input data, and outputting the encrypted data;

a path that inputs a part or all the encrypted data that are output from the calculation means to the hold means; and

signal generation means for generating the trigger signal and the reset signal supplied to the hold means and the one or plurality of counters according to a predetermined rule and/or at predetermined timing.

2. The encryption apparatus as set forth in claim 1,

wherein a fixed value is input to the encryption means, and

wherein the encryption means encrypts the fixed value, the data held by the hold means, and the one or plurality of count values.

3. The encryption apparatus as set forth in claim 1,

wherein the reset signal that resets the data held by the hold means is supplied to the hold means at timing in synchronization with the reset signal supplied to at least one of the one or plurality of counters.

4. The encryption apparatus as set forth in claim 1,

wherein the input data are picture data, and wherein the reset signal that resets the hold means is in synchronization with the picture data.

5. The encryption apparatus as set forth in claim 4,

wherein the reset signal that resets the hold means is in synchronization with each line of the picture data.

6. The encryption apparatus as set forth in claim 1,

wherein the input data are picture data, and wherein the reset signal that resets at least one of the one or plurality of counters is in

synchronization with the picture data.

7. The encryption apparatus as set forth in claim 6,

5 wherein the reset signal that resets at least one of the one or plurality of counters is in synchronization with each frame of the picture data.

8. The encryption apparatus as set forth in claim 6,

10 wherein the reset signal that resets at least one of the one or plurality of counters is in synchronization with each line of the picture data.

9. An encryption method, comprising the steps of:

15 holding a part or all input data with a trigger signal and resetting the held data with a reset signal;

counting up or down the count values with the trigger signal and resetting the count values to predetermined values with the reset signal;

20 encrypting the data held at the hold step and one or a plurality of count values at the count step;

calculating the output at the encryption step and input data that are input from the outside according to a predetermined rule, encrypting the input data, and outputting the encrypted data;

25 inputting a part or all the encrypted data that are output at the calculation step to the hold

step; and

generating the trigger signal and the reset
signal supplied to the hold step and the count step
according to a predetermined rule and/or at
predetermined timing.

10. An encryption program that causes a computer
device to execute an encryption method, the encryption
method comprising the steps of:

holding a part or all input data with a
trigger signal and resetting the held data with a reset
signal;

counting up or down the count values with the
trigger signal and resetting the count values to
predetermined values with the reset signal;

encrypting the data held at the hold step and
one or a plurality of count values at the count step;

calculating the output at the encryption step
and input data that are input from the outside
according to a predetermined rule, encrypting the input
data, and outputting the encrypted data;

inputting a part or all the encrypted data
that are output at the calculation step to the hold
step; and

generating the trigger signal and the reset
signal supplied to the hold step and the count step
according to a predetermined rule and/or at
predetermined timing.

11. A record medium from which a computer device can read an encryption program that causes the computer device to execute an encryption method, the encryption method comprising the steps of:

5 holding a part or all input data with a trigger signal and resetting the held data with a reset signal;

counting up or down the count values with the trigger signal and resetting the count values to
10 predetermined values with the reset signal;

encrypting the data held at the hold step and one or a plurality of count values at the count step;

calculating the output at the encryption step and input data that are input from the outside
15 according to a predetermined rule, encrypting the input data, and outputting the encrypted data;

inputting a part or all the encrypted data that are output at the calculation step to the hold step; and

20 generating the trigger signal and the reset signal supplied to the hold step and the count step according to a predetermined rule and/or at predetermined timing.

12. A decryption apparatus that decrypts
25 encrypted data encrypted by an encryption apparatus that comprises hold means for holding a part or all input data with a trigger signal and resetting the held

data with a reset signal; one or a plurality of
counters that count up or count down the count values
with the trigger signal and reset the count values to
predetermined values with the reset signal; encryption
5 means for encrypting the data held by the hold means
and one or a plurality of count values of the one or
plurality of counters; calculation means for
calculating the output of the encryption means and
input data that are input from the outside according to
10 a predetermined rule, encrypting the input data, and
outputting the encrypted data; a path that inputs a
part or all the encrypted data that are output from the
calculation means to the hold means; and signal
generation means for generating the trigger signal and
15 the reset signal supplied to the hold means and the one
or plurality of counters according to a predetermined
rule and/or at predetermined timing, the decryption
apparatus comprising:

20 hold means for holding a part or all
input data with a trigger signal and resetting the held
data with a reset signal;

one or a plurality of counters that count up
or count down the count values with the trigger signal
and reset the count values to predetermined values with
25 the reset signal;

encryption means for encrypting the data held
by the hold means and one or a plurality of count

values of the one or plurality of counters;

calculation means for calculating the output of the encryption means and input data that are input from the outside according to a predetermined rule,
5 encrypting the input data, and outputting the encrypted data;

a path that inputs a part or all the encrypted data that are input from the outside to the hold means; and

10 signal generation means for generating the trigger signal and the reset signal supplied to the hold means and the one or plurality of counters according to a predetermined rule and/or at predetermined timing.

15 13. The decryption apparatus as set forth in claim 12,

wherein a fixed value is input to the encryption means, and

20 wherein the encryption means encrypts the fixed value, the data held by the hold means, and the one or plurality of count values.

14. The decryption apparatus as set forth in claim 12,

25 wherein the reset signal that resets the data held by the hold means is supplied to the hold means at timing in synchronization with the reset signal supplied to at least one of the one or plurality of

counters.

15. The decryption apparatus as set forth in
claim 12,

wherein the encrypted data are encrypted
5 picture data, and

wherein the reset signal that resets the hold
means is in synchronization with the picture data.

16. The decryption apparatus as set forth in
claim 15,

10 wherein the reset signal that resets the hold
means is in synchronization with each line of the
picture data.

17. The decryption apparatus as set forth in
claim 12,

15 wherein the encrypted data are encrypted
picture data, and

wherein the reset signal that resets at least
one of the one or plurality of counters is in
synchronization with the picture data.

20 18. The decryption apparatus as set forth in
claim 17,

wherein the reset signal that resets at least
one of the one or plurality of counters is in
synchronization with each frame of the picture data.

25 19. The decryption apparatus as set forth in
claim 17,

wherein the reset signal that resets at least

one of the one or plurality of counters is in
synchronization with each line of the picture data.

20. A decryption method of decrypting encrypted
data encrypted in an encryption method, the encryption
5 method comprising the steps of holding a part or all
input data with a trigger signal and resetting the held
data with a reset signal; counting up or down the count
values with the trigger signal and resetting the count
values to predetermined values with the reset signal;
10 encrypting the data held at the hold step and one or a
plurality of count values at the count step;
calculating the output at the encryption step and input
data that are input from the outside according to a
predetermined rule, encrypting the input data, and
15 outputting the encrypted data; inputting a part or all
the encrypted data that are output at the calculation
step to the hold step; and generating the trigger
signal and the reset signal supplied to the hold step
and the count step according to a predetermined rule
20 and/or at predetermined timing, the decryption method
comprising the steps of:

 holding a part or all input data with a
trigger signal and resetting the held data with a reset
signal;

25 counting up or down the count values with the
trigger signal and resetting the count values to
predetermined values with the reset signal;

encrypting the data held at the hold step and
one or a plurality of count values at the count step;

calculating the output at the encryption step
and input data that are input from the outside

5 according to a predetermined rule, encrypting the input
data, and outputting the encrypted data;

inputting a part or all the encrypted data
that are input from the outside to the hold step; and

10 generating the trigger signal and the reset
signal supplied to the hold step and the count step
according to a predetermined rule and/or at
predetermined timing.

21. A decryption program that causes a computer
device to execute a decryption method of decrypting
15 encrypted data encrypted in an encryption method, the
encryption method comprising the steps of holding a
part or all input data with a trigger signal and
resetting the held data with a reset signal; counting
up or down the count values with the trigger signal and
20 resetting the count values to predetermined values with
the reset signal; encrypting the data held at the hold
step and one or a plurality of count values at the
count step; calculating the output at the encryption
step and input data that are input from the outside
25 according to a predetermined rule, encrypting the input
data, and outputting the encrypted data; inputting a
part or all the encrypted data that are output at the

calculation step to the hold step; and generating the trigger signal and the reset signal supplied to the hold step and the count step according to a predetermined rule and/or at predetermined timing, the decryption method comprising the steps of:

holding a part or all input data with a trigger signal and resetting the held data with a reset signal;

counting up or down the count values with the trigger signal and resetting the count values to predetermined values with the reset signal;

encrypting the data held at the hold step and one or a plurality of count values at the count step;

calculating the output at the encryption step and input data that are input from the outside according to a predetermined rule, encrypting the input data, and outputting the encrypted data;

inputting a part or all the encrypted data that are input from the outside to the hold step; and

generating the trigger signal and the reset signal supplied to the hold step and the count step according to a predetermined rule and/or at predetermined timing.

22. A record medium from which a computer device can read a decryption program that causes the computer device to execute a decryption method of decrypting encrypted data encrypted in an encryption method, the

encryption method comprising the steps of holding a
part or all input data with a trigger signal and
resetting the held data with a reset signal; counting
up or down the count values with the trigger signal and
5 resetting the count values to predetermined values with
the reset signal; encrypting the data held at the hold
step and one or a plurality of count values at the
count step; calculating the output at the encryption
step and input data that are input from the outside
10 according to a predetermined rule, encrypting the input
data, and outputting the encrypted data; inputting a
part or all the encrypted data that are output at the
calculation step to the hold step; and generating the
trigger signal and the reset signal supplied to the
15 hold step and the count step according to a
predetermined rule and/or at predetermined timing, the
decryption method comprising the steps of:

holding a part or all input data with a
trigger signal and resetting the held data with a reset
20 signal;

counting up or down the count values with the
trigger signal and resetting the count values to
predetermined values with the reset signal;

encrypting the data held at the hold step and
25 one or a plurality of count values at the count step;

calculating the output at the encryption step
and input data that are input from the outside

according to a predetermined rule, encrypting the input data, and outputting the encrypted data;

inputting a part or all the encrypted data that are input from the outside to the hold step; and

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generating the trigger signal and the reset signal supplied to the hold step and the count step according to a predetermined rule and/or at predetermined timing.

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